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A POCKET MOUSE IN CONFINEMENT.

J. A. ALLEN.

THE arid plains and deserts of the West are inhabited by many kinds of small rodents, some of which, like the pocket mice, the kangaroo rats, and most of the pocket gophers and prairie dogs, are peculiar to these arid areas, and constitute their most characteristic forms of mammalian life. They range in greater or less abundance and diversity of forms from near the northern boundary of the United States to southern Mexico. Their habits of life are such that they must pass much of each year without access to water, and the question has often been raised as to whether they are able to exist without water, deriving sufficient moisture from the seeds and fresh vegetation that form their food, or whether they sink burrows or "wells" to a sufficient depth to obtain it from subterranean sources. In the case of prairie dogs this latter theory has received wide acceptance, but, of course, has never been demonstrated.

The few observations that have been made on captive animals belonging to these several groups have sufficed to show that access to water is not essential to their welfare in captivity ; but perhaps no instance affording quite such satisfactory evidence has been given as the case here related. In the summer of 1895 a valued correspondent and well-known naturalist, Mr. H. P. Attwater, of San Antonio, Texas, captured near San Antonio a number of living examples of two species of pocket mice (*Perognathus mearnsi* Allen and *Perognathus paradoxus spilotus* Merriam), which he kept alive during the following winter and kindly sent, still alive, by express to the American Museum of Natural History, New York City, in June, 1896. There were four individuals, two of each of the species named above. One of the larger (*Perognathus paradoxus spilotus*) died on reaching New York, from the effects of the journey ; the other lived contentedly for several weeks in an open box

covered with wire netting, but finally escaped and was lost. Of the two smaller (*Perognathus mearnsi*), one soon died, and the other is still living, in apparently good health, after confinement for nearly four years. Mr. Attwater stated that during the time he had them they "fed readily on cane seed, oats, and corn, but had received no water." Also that these little creatures "when kept in confinement become very tame, and seem to like to be handled."

On arriving in New York, water was supplied them regularly for several weeks, but as they appeared to make no use of it, it was soon omitted from the bill of fare, which consisted exclusively of mixed bird seed. Our present captive has had no water offered him for nearly three years. His domicile is a tin box, about 14 inches by 20, and 10 inches deep, open at the top, but with a thick layer of earth at the bottom, which it forms his chief occupation to tunnel and transform, by heaping it up first in one corner and then in another. As he is strictly nocturnal in habits, little is seen of him, unless he is forced to come out by being disturbed in the daytime. He is readily susceptible to the influence of low temperature, and in winter, when the temperature falls to 60° F. or a little below, will remain for days in apparently a state of temporary hibernation.

When an ounce or two of mixed seed is supplied him at one time, he either works industriously till all is hidden away in his underground galleries, or he diverts himself by sorting out the different kinds of seed and making separate deposits of each kind in different corners of the box, above ground.

As no water and no fresh vegetation have been given him for nearly three years, it is evident that the only moisture required for his sustenance is derived wholly from dry bird seed. This seems to demonstrate that these little desert animals, often found living far from any sure source of water supply, are fitted by their organization to exist entirely without access to that element which to ordinary animals is so indispensable, and generally thought to be essential to at least all mammalian life.